Supplementary Table 1: Behavioral Ethogram (Bliss-Moreau, 2017)

Behavior	Description
States	
Close Social Interactions	
Extended Aggression	Animals bite, slap, chase, or grab at each other
Extended Contact	Animals are in physical contact
Extended Groom	Examination, picking, or licking of another animal's fur or body
Extended Mount	Any instance of mounting
Extended Play	Continuous rough and tumble play and/or play threats, including playful chase
Proximity Zone	Focal animal is within the marked rectangle in front of the stimulus cage
Proximity	Focal animal is directly in front of the constrained animal
Non-Social States	
Nonsocial Activity	Animal remains out of all social states and Is locomotive with head up, actively engaged in the environment
Nonsocial Stationary	Animal remains out of all social states and Is non-locomotive with head up, actively engaged in the environment
Nonsocial Inactivity	Animal remains out of all social states with head down, not engaged in environment, often staring off into space
Extended Stereotypy	Focal animal is engaged in repetitive self-directed or motor stereotypic behavior
Events	
Communicative Signaling	
Affiliative	
Approach	Intentional movement within arm's reach of another animal
Accept Approach	Animal remains within arm's reach after the other animal approaches
Anogenital Exploration	Oral, visual, olfactory, or manual exploration of the other animals anogenital area
Contact	Physical contact between animals that is not aggressive
Coo	Clear, soft sounds, moderate in pitch and intensity; usually sounds like "whoooooo"
Follow	Intentional follow of another animal
Groom	Examination, picking, or licking of another animal's fur or body
Grunt	Deep, muffled, low-intensity vocalization
Girney	Quiet, nasal whine, usually emitted during affiliative encounters
Lipsmack	Rapid lip movements with pursed or puckered lips, usually accompanied by smacking sounds
Huddle	Physical contact that involves one animal ventrally touching another animal
Jaw-Thrust	Rapid lipsmack and grimace and/or brow raise usually seen while the animal walks by or approaches and then leaves quickly
Joint Threat	Both animals threaten observer in unison
Mount	Mount that includes all of the following components: appropriate positioning of partner, hands on back, double foot clasp
Mount Attempt	Any component of a mouth that is attempted through the metal grille
Present Groom	Intentional, exaggerated presentation of a part of body to another animal
Present Neck	Presentation of neck to another animal
Present Rump	Rigid posture with rump and tail elevated and oriented toward another individual
Threat-Solicitation	Animal recruits the other animal in threatening the observer or another animal
Agonistic/"Aggression"	
Aggression	Grabbing, slapping, and biting of another animal
Aggressive Grunt	Low-pitched guttural sound, accompanied by a threat
Alarm Bark	Short, sharp sound
Cage Shake	Vigorous shaking of cage, or body slam against bars
Crooktail	Tail held up stiff in a "?" shape
Displacement	Physical movement in which an animal "takes the place" of another animal
Muzzle	Contact
Threat	Contains one or more of the following components: open mouth stare, head bobbing, ear flaps, bark vocalizations, or lunges
Submission/"Fear"	
Avoid	Animal leaves the area when the other animal comes near or is about to approach
Grimace	Exaggerated movement of lips such that lips are pulled back with teeth showing
Flee	Rapid, intentional movement away from another animal
Freeze	Stiff body posture without any movement for more than three seconds
Scream	High-pitched vocalization, with extreme high intensity; sounds like "eeeeeeeeee"
Exploration	
Manual	Exploration of the cage or environment with the hands
Oral	Exploration of the cage or environment with the mouth
Stress-Related	
Scratch	Scratches own body
Self-Groom	Use of hands to pick through or lick a fur or non-fur body part
Self-Shake	Vigorous shaking of the body
Tooth Grind	Repetitive audible rubbing of upper and lower teeth
Yawn	Yawn
Other	
Self Sex	Anogenital exploration of self
Stereotypic	
Self-Directed	Repetitive behavior acted on self, including: repetitive swaying back and forth, covering hand over eye or eye pokes, unusual holding of body part or limb, biting at oneself, self-strumming
Whole-Body	Repetitive motor behavior including: back flipping, hopping, twirling, swinging, or undirected movement with the same path repeated
Heat Twist	Animal twists neck in a dramatic display

Note that a number of codes were not scored in the current study, since they represent social interaction with other monkeys.

Supplementary Table 2: Statistical analyses of the number of c-fos positive cells in the different layers of distinct subdivisions of the entorhinal cortex.

Regions & layers		ANOVAs		Post-hoc comparisons		
		F-value	p-value	LE vs LC	CE vs LE	CE vs LC
Eo	All layers	$F_{(2,7)} = 1.396$	0.309			
	I, II, III	$F_{(2,7)} = 1.192$	0.358			
	V, VI	$F_{(2,7)} = 2.316$	0.169			
Er	All layers	$F_{(2,7)} = 0.723$	0.518			
	I, II, III	$F_{(2,7)} = 0.940$	0.435			
	V, VI	$F_{(2,7)} = 0.355$	0.713			
El	All layers	$F_{(2,7)} = 0.156$	0.859			
	I, II, III	$F_{(2,7)} = 0.406$	0.681			
	V, VI	$F_{(2,7)} = 0.030$	0.971			
Ei	All layers	$F_{(2,7)} = 10.005$	**0.009**	**0.030**	0.079	**0.003**
	I, II, III	$F_{(2,7)} = 6.064$	**0.030**	0.058	0.199	**0.011**
	V, VI	$F_{(2,7)} = 5.829$	**0.032**	0.110	0.111	**0.011**
Ecaudal	All layers	$F_{(2,7)} = 7.617$	**0.018**	0.946	**0.009**	**0.014**
	I, II, III	$F_{(2,7)} = 10.998$	**0.007**	0.865	**0.004**	**0.005**
	V, VI	$F_{(2,7)} = 4.889$	**0.047**	0.795	**0.022**	**0.042**

Supplementary Table 3: Statistical analyses of the number of c-fos positive cells in the different layers of distinct subdivisions of the perirhinal and parahippocampal cortices.

Regions & layers		ANOVAs		Post-hoc comparisons		
		F-value	p-value	LE vs LC	CE vs LE	CE vs LC
Perirhinal						
35	All layers	$F_{(2,7)}$ = 2.246	0.176			
	I, II, III	$F_{(2,7)}$ = 2.369	0.164			
	V, VI	$F_{(2,7)}$ = 2.007	0.205			
36d	All layers	$F_{(2,7)}$ = 1.439	0.299			
	I, II, III	$F_{(2,7)}$ = 0.876	0.458			
	V, VI	$F_{(2,7)}$ = 1.283	0.335			
36r	All layers	$F_{(2,7)}$ = 3.172	0.105			
	I, II, III	$F_{(2,7)}$ = 2.960	0.117			
	IV	$F_{(2,7)}$ = 2.727	0.133			
	V, VI	$F_{(2,7)}$ = 2.441	0.157			
36c	All layers	$F_{(2,7)}$ = 15.537	**0.003**	**0.036**	**0.012**	**0.001**
	I, II, III	$F_{(2,7)}$ = 24.015	**0.001**	**0.007**	**0.008**	**<0.001**
	IV	$F_{(2,7)}$ = 11.900	**0.006**	0.197	**0.009**	**0.002**
	V, VI	$F_{(2,7)}$ = 7.017	**0.021**	0.179	**0.043**	**0.008**
Parahippocampal						
TH	All layers	$F_{(2,7)}$ = 13.022	**0.004**	0.474	**0.004**	**0.002**
	I, II, III	$F_{(2,7)}$ = 13.429	**0.004**	0.293	**0.005**	**0.002**
	V, VI	$F_{(2,7)}$ = 12.571	**0.005**	0.864	**0.002**	**0.004**
TF	All layers	$F_{(2,7)}$ = 15.451	**0.003**	0.148	**0.005**	**0.001**
	I, II, III	$F_{(2,7)}$ = 10.136	**0.009**	0.097	**0.024**	**0.003**
	IV	$F_{(2,7)}$ = 6.146	**0.029**	0.697	**0.021**	**0.016**
	V, VI	$F_{(2,7)}$ = 79.566	**<0.001**	0.656	**<0.001**	**<0.001**
Density of c-fos positive cells in the parahippocampal cortex						
		$F_{(2,7)}$ = 7.492	**0.018**	**0.043**	0.146	**0.006**

Supplementary Table 4: Statistical analyses of the number of c-fos positive cells in the different layers of distinct subdivisions of the posterior cingulate and retrosplenial cortices.

Regions & layers		ANOVAs		Post-hoc comparisons		
		F-value	p-value	LE vs LC	CE vs LE	CE vs LC
Post cingulate						
23	All layers	$F_{(2,7)}$ = 15.983	**0.002**	0.079	**0.006**	**0.001**
	I, II, III	$F_{(2,7)}$ = 18.589	**0.002**	0.061	**0.004**	**0.001**
	IV	$F_{(2,7)}$ = 10.275	**0.008**	0.348	**0.009**	**0.004**
	V, VI	$F_{(2,7)}$ = 6.344	**0.027**	0.188	0.054	**0.010**
Retrosplenial						
29	All layers	$F_{(2,7)}$ = 4.942	**0.046**	0.234	0.082	**0.017**
	ml + epl	$F_{(2,7)}$ = 9.358	**0.011**	0.126	**0.025**	**0.004**
	ipl + pl	$F_{(2,7)}$ = 0.768	0.500			
30	All layers	$F_{(2,7)}$ = 32.051	**<0.001**	**0.005**	**0.003**	**<0.001**
	I, II, III	$F_{(2,7)}$ = 39.480	**<0.001**	**0.004**	**0.001**	**<0.001**
	IV	$F_{(2,7)}$ = 20.395	**0.001**	**0.017**	**0.007**	**<0.001**
	V, VI	$F_{(2,7)}$ = 6.525	**0.025**	**0.045**	0.217	**0.009**

Abbreviations. ml: molecular layer; epl: external pyramidal layer; ipl: internal pyramidal layer; pl: polymorphic layer